

Form PTO-1390 (REV 10-95)		U.S. Department of Commerce Patent and Trademark Office		ATTORNEY'S DOCKET NUMBER  <b>FMW-EE-PCT-US</b>	
<b>TRANSMITTAL LETTER TO THE UNITED STATES DESIGNATED/ELECTED OFFICE (DO/EO/US) CONCERNING A FILING UNDER 35 U.S.C. 371</b>				U.S. APPLICATION NO. (If known, see 37 CFR 1.5) <b>097786041</b>	
INTERNATIONAL APPLICATION NO. <b>PCT/EP99/06338</b>		INTERNATIONAL FILING DATE <b>28 August 1999</b>		PRIORITY DATE CLAIMED <b>28 August 1998</b>	
TITLE OF INVENTION: <b>SUPPORTING DEVICE</b>					
APPLICANT(S) FOR DO/EO/US: <b>ALGUERA GALLEGO, Jose Manuel; MULLER, Gerald; and PFISTER, Steffen</b>					
Applicant herewith submits to the United States Designated/Elected Office (DO/EO/US) the following items and other information:					
<p>1. <input checked="" type="checkbox"/> This is a FIRST submission of items concerning a filing under 35 U.S.C. 371.</p> <p>2. <input type="checkbox"/> This is a SECOND or SUBSEQUENT submission of items concerning a filing under 35 U.S.C. 371.</p> <p>3. <input type="checkbox"/> This express request to begin national examination procedures (35 U.S.C. 371(f) at any time rather than delay examination until the expiration of the applicable time limit set in 35 U.S.C. 371(b) and PCT Article 22 and 39(1).</p> <p>4. <input type="checkbox"/> A proper Demand for International Preliminary Examination was made by the 19<sup>th</sup> month from the earliest claimed priority date.</p> <p>5. <input checked="" type="checkbox"/> A copy of the International Application as filed (35 U.S.C. 371(c)(2))</p> <p style="padding-left: 40px;">a. <input type="checkbox"/> is transmitted herewith (required only if not transmitted by the International Bureau).</p> <p style="padding-left: 40px;">b. <input checked="" type="checkbox"/> has been transmitted by the International Bureau.</p> <p style="padding-left: 40px;">c. <input type="checkbox"/> is not required, as the application was filed in the United States Receiving Office (RO/US).</p> <p>6. <input checked="" type="checkbox"/> A translation of the International Application into English (35 U.S.C. 371(c)(2))</p> <p style="padding-left: 40px;"><input type="checkbox"/> Amendments to the claims of the International Application under PCT Article 19 (35 U.S.C. 371(c)(3))</p> <p style="padding-left: 80px;">a. <input type="checkbox"/> are transmitted herewith (required only if not transmitted by the International Bureau).</p> <p style="padding-left: 80px;">b. <input type="checkbox"/> has been transmitted by the International Bureau.</p> <p style="padding-left: 80px;">c. <input type="checkbox"/> have not been made; however, the time limit for making such amendments has NOT expired.</p> <p style="padding-left: 80px;">d. <input type="checkbox"/> have not been made and will not be made.</p> <p style="padding-left: 40px;"><input type="checkbox"/> A translation of the amendments to the claims under PCT Article 19 (35 U.S.C. 371(c)(3))</p> <p>7. <input checked="" type="checkbox"/> An oath or declaration of the inventor(s) (35 U.S.C. 371(c)(4)).</p> <p>8. <input type="checkbox"/> A translation of the annexes to the International Preliminary Examination Report under PCT Article 36 (35 U.S.C. 371(c)(5)).</p> <p>9. <input type="checkbox"/> A translation of the annexes to the International Preliminary Examination Report under PCT Article 36 (35 U.S.C. 371(c)(5)).</p> <p>10. <input type="checkbox"/> A translation of the annexes to the International Preliminary Examination Report under PCT Article 36 (35 U.S.C. 371(c)(5)).</p> <p><b>Items 11. to 16. below concern document(s) or information included:</b></p> <p>11. <input checked="" type="checkbox"/> An Information Disclosure Statement under 37 CFR 1.97 and 1.98.</p> <p>12. <input type="checkbox"/> An assignment document for recording. A separate cover sheet in compliance with 37 CFR 3.28 and 3.31 is included.</p> <p>13. <input checked="" type="checkbox"/> A FIRST preliminary amendment.</p> <p style="padding-left: 40px;">A SECOND or SUBSEQUENT preliminary amendment.</p> <p>14. <input type="checkbox"/> A substitute specification.</p> <p>15. <input type="checkbox"/> A change of power of attorney and/or address letter.</p> <p>16. <input type="checkbox"/> Other items or information:</p>					

U.S. APPLICATION NO. (If known, see 37 CFR 1.5)

09/786041

INTERNATIONAL APPLICATION NO.  
PCT/EP99/06338ATTORNEY'S DOCKET NUMBER  
FMW-EE-PCT-US17. ☒ The following fees are submitted:

## BASIC NATIONAL FEE (37 CFR 1.492(A)(1)-(5))

Search Report has been prepared by the EPO or JPO ..... \$860.00

International preliminary examination fee paid to USPTO (37 CFR 1.482) ..... \$690.00

No international preliminary examination fee paid to USPTO (37 CFR 1.482)  
but international search fee paid to USPTO (37 CFR 1.445(a)(2)) ..... \$710.00

Neither international preliminary examination fee (37 CFR 1.482) nor  
international search fee (37 CFR 1.445(a)(2)) paid to USPTO ..... \$1,000.00

International preliminary examination fee paid to USPTO (37 CFR 1.482)  
and all claims satisfied provisions of PCT Article 33(2)-(4) ..... \$100.00

ENTER APPROPRIATE BASIC FEE AMOUNT =

\$860.00

Surcharge of \$130.00 for furnishing the oath or declaration later than  
months from the earliest claimed priority date (37 CFR 1.492(e))20 ☐ 30 ☐

\$

CLAIMS	NUMBER FILED	NUMBER EXTRA	RATE
Total Claims	8-20=	0	X\$18.00
Independent Claims	1-3=	0	X\$80.00
MULTIPLE DEPENDENT CLAIM(S) (if applicable)			+\$270.00

TOTAL OF ABOVE CALCULATION =

\$860.00

Reduction of 1/2 for filing by small entity, if applicable. Verified Small Entity Statement must also be  
filed (Note 37 CFR 1.9, 1.27, 1.28)

\$0

SUBTOTAL =

\$860.00

Processing fee of \$130.00 for furnishing the English translation later than  
months from the earliest claimed priority date (37 CFR 1.492(f)).20 ☐ 30 ☐

+

\$0

TOTAL NATIONAL FEE =

\$860.00

Fee for recording the enclosed assignment (37 CFR 1.21(h)). The assignment must be  
accompanied by an appropriate cover sheet (37 CFR 3.28, 3.31). \$40.00 per property

+

\$0.00

TOTAL FEES ENCLOSED =

\$860.00

Amount to be  
refunded: \$

Charged: \$

a. ☒ A check in the amount of **\$860.00** to cover the above fees is enclosed.b. ☐ Please charge my Deposit Account No. \_\_\_\_\_ in the amount of \$ \_\_\_\_\_ to cover the above fees.  
A duplicate copy of this sheet is enclosed.c. ☒ The Commissioner is hereby authorized to charge any additional fees which may be required, or credit any overpayment to  
Deposit No. **08-3150**. A duplicate copy of this sheet is enclosed.NOTE: Where an appropriate time limit under 37 CFR 1.494 or 1.495 has been met, a petition to revive (37 CFR 1.137(a) or (b)) must be filed and  
granted to restore the application to pending status.

SEND ALL CORRESPONDENCE TO:

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Signature

Daniel J. Hudak Jr.  
Name

P-47,669  
Registration Number

PATENT COOPERATION TREATY  
U.S. RECEIVING OFFICE  
TO THE INTERNATIONAL PRELIMINARY EXAMINING AUTHORITY

Applicant: Jose Manuel Alguera Gallego et al  
International Application No.: PCT/EP99/06338  
International Filing Date: 28 August 1999  
Title: SUPPORTING DEVICE  
Agent's Reference No.: FMW-EE-PCT-US  
Date: February 28, 2001

PRELIMINARY AMENDMENT

Sir:

IN THE SPECIFICATION:

Please amend the application as follows:

Page 1:

Two lines down from the title of the invention please delete  
"Description" and insert --FIELD OF THE INVENTION --.

Page 1:

Line 9, please insert --BACKGROUND OF THE INVENTION--.

Page 2:

Line 4, please insert -- SUMMARY OF THE INVENTION--.

Page 5:

Lines 15 and 16 , please delete "Examples of designs for this invention are elucidated in more detail using the drawings listed in the following."

Line 18, please delete "Designs shown:", and please insert --**BRIEF**

**DESCRIPTION OF THE DRAWINGS--.**

Line 26, please insert --**DETAILED DESCRIPTION OF THE INVENTION--**

Page 10:

Line 1, please delete "Patent Claims" and insert therefore -- **WHAT IS CLAIMED IS:--.**

**IN THE CLAIMS:**

Please amend the originally filed claims as follows:

Please substitute the following claims for the pending claim of the same number.

1. (Amended) A supporting device for semi-trailers comprising:  
an outer sleeve;  
a spindle for a telescopic inner sleeve; and  
a foot receiving device for attaching a support foot, the foot receiving device connected to a bottom end of the inner sleeve, the foot-receiving device comprising:  
a component that occludes the inner sleeve,

an opening for the spindle penetration;  
at least one bracing element at a top or bottom end; and  
two opposing bearing points adapted to accommodate the  
support foot.

2. (Amended) The supporting device according to Claim 1, wherein  
the bracing element is arranged within the inner sleeve.

3. (Amended) The supporting device according to Claim 1, wherein  
the bracing element extends at least between the bearing points.

4. (Amended) The supporting device according to Claim 1, wherein  
the component is a plate and the bracing element is a bracing rib.

5. (Amended) The supporting device according to Claim 1, wherein  
the bracing rib has a curved shape and is located around the opening.

6. (Amended) The supporting device according to Claim 1, wherein  
the plate has an edge section located outside of the bracing rib for  
attachment of the inner sleeve.

7. (Amended) The supporting device according to Claim 1, wherein  
the bearing points are arranged on the plate plane.

8. (Amended) The supporting device according to Claim 1, wherein  
a circumferential bracing rib, which engages the inner sleeve in a forced fit,  
is arranged on the top of the plate and forms a bottom part that constitutes  
a cover at the bottom of the circumferential rib.

The following is a marked version of the pending claims with all the changes shown in conventional comparison.

1. (Amended) A supporting device for semi-trailers [with] comprising:

an outer sleeve; [and]

a spindle for a telescopic inner sleeve; and [at whose bottom end]

a foot receiving device for attaching a support foot [is mounted],  
[characterized by] the foot receiving device connected to a bottom end of the inner sleeve, the foot-receiving device [(1)] comprising:

a component that [includes] occludes the inner sleeve [(8)],  
[which possesses]

an opening [(3)] for the spindle [(11)] penetration[.];

at least one bracing element [(5, 5a, b, 6, 6a, b)] at [its] a top  
or bottom end; and

two [(2)] opposing bearing points adapted to accommodate  
[(4a, 4b) for accommodating] the support foot.

2. (Amended) The [A] supporting device [in accordance with]  
according to Claim 1, [characterized by] wherein the bracing element [(5a,  
b, 6a, b) being] is arranged within the inner sleeve [(8)].

3. (Amended) The [A] supporting device [in accordance with  
either] according to Claim 1 [or Claim 2], [characterized by] wherein the  
bracing element [(5, 5a, b, 6, 6a, b) extending] extends at least [to]  
between the bearing points [(4a, b)].

4. (Amended) The [A] supporting device [in accordance with one  
of the previous claims] according to Claim 1 [through 3], [characterized by]

wherein the component [being] is a plate [(2)] and the bracing element [being] is a bracing rib [(5a, b, 6a, b)].

5. (Amended)      The [A] supporting device [in accordance with one of the previous claims] according to Claim 1 [through 4], [characterized by] wherein the bracing rib [(5a, b, 6a, b) having] has a curved shape and [being] is located around the opening [(3)].

6. (Amended)      The [A] supporting device [in accordance with one of the previous claims] according to Claim 1 [through 5], [characterized by] wherein the plate [(2) possessing] has an edge section [(7)] located outside of the bracing rib [(5a, b, 6a, b)] for attachment of the inner sleeve [(8)].

7. (Amended)      The [A] supporting device [in accordance with one of the previous claims] according to Claim 1 [through 6], [characterized by] wherein the bearing points [(4a, b) being] are arranged on the plate [(2)] plane.

8. (Amended)      The [A] supporting device [in accordance with one of the previous claims] according to Claim 1 [through 7], [characterized by] wherein a circumferential bracing rib [(5)], which engages the inner sleeve [(8)] in a forced fit, [being] is arranged on the top of the plate [(2)] and [which] forms a bottom part [(13)] that constitutes a cover [(12)] at the bottom of the circumferential rib [(6)].

**IN THE ABSTRACT:**

Please amend the Abstract as follows:

**ABSTRACT**

The invention relates to a supporting device, which comprises a larger clearance for the spindle, whereby the foot receiving device should comprise a high level of stability. The foot-receiving device [(1)] comprises a component, which occludes the inner sleeve [(8)]. Said component comprises an opening [(3)] for admitting the spindle [(11)], at least one bracing element [(5, 5a, b, 6, 6a, b)] located on the upper and/or bottom sides thereof, and two opposing bearing points [(4a, 4b)] for the support foot.

Respectfully submitted,

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(J 166)



PATENT COOPERATION TREATY  
U.S. RECEIVING OFFICE  
TO THE INTERNATIONAL PRELIMINARY EXAMINING AUTHORITY

Applicants: Alguera Gallego et al  
U.S. Serial No.: 09/786,041  
International Application No.: PCT/EP99/06338  
International Filing Date: 28 August 1999  
Title: SUPPORTING DEVICE  
Agent's Reference No.: FMW-EE-PCT-US  
Date: May 11, 2001

PRELIMINARY AMENDMENT

Sir:

IN THE CLAIMS:

Please amend the originally filed claims 9 through 13 as follows:

Please substitute the following claims for the pending claim of the same number.

9. (Amended) A supporting device according to Claim 8, wherein the foot receiving device consists of two laterally reversed halves.

10. (Amended) A supporting device according to Claim 1, wherein the component comprises a vertically arranged tube whose outside diameter is less than or equal to the inside diameter of the inner sleeve in at least one section.

11. (Amended) A supporting device according to Claim 10, wherein the tube is a rectangular tube.



The following is a MARKED version of the pending claims with all the changes shown in conventional comparison.

9. (Amended) A supporting device [in accordance with] according to Claim 8, [characterized by] wherein the foot receiving device [(1)] [consisting] consists of two [(2)] laterally reversed halves [(1a, b)].

10. (Amended) A supporting device [in accordance with] according to Claim 1, [characterized by] wherein the component [comprising] comprises a vertically arranged tube [(15)] whose outside diameter is less than or equal to the inside diameter of the inner sleeve [(8)] in at least one section.

11. (Amended) A supporting device [in accordance with] according to Claim 10, [characterized by] wherein the tube [(15) being] is a rectangular tube.


12. (Amended) A supporting device [in accordance with] according to Claim 10 [or 11], [characterized by] wherein the bearing points [(4a, b) being] are attached to the outer surface of the tube [(15)].

13. (Amended) A supporting device [in accordance with one of the previous] according to Claim[s] 1 [through 7 or 9 through 12], [characterized by] wherein the opening [(3) being] is closed off by a cover [(12)].

Thus, all the claims have now been amended to put them in better form and delete the multiple dependencies.

Respectfully submitted,

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Attorney Docket No.: FMW-EE-PCT-US (J 166)

## Supporting Device

### Description

5 This invention involves a supporting device for use with a semi-trailer with an outer sleeve and a telescopic (by means of spindle) inner sleeve at whose end is located a foot-receiving device for attachment of a support foot.

10 A support device similar to this is described, for example, in EP 0 322 634 A2. A component, which sustains a bearing sleeve, is attached, i.e. by welding, at the bottom end of the expandable and/or retractable support element of each support. This component comprises two legs that are angled downward and facing one another. The bearing sleeve is welded to the longitudinal edges of these legs. A rotatable hollow shaft, to which two rolling segments are attached, is supported in the bearing sleeve. The surfaces of the rolling segments allow them to roll off of the footplate when the supports move forward when the semi-trailer is detached.

15 20 This foot-receiving device possesses several disadvantages. Due to the fact that the hollow shaft and the bearing sleeve extend over the entire width of the support, the spindle comes into contact with this bearing sleeve when the telescopic inner sleeve is retracted, and the minimum length of the retracted support device is limited by the bearing sleeve.

25 A further disadvantage is the fact that a dedicated foot-receiving device is required for each support device/support foot combination.

30 A U-shaped bracket has been developed, which is attached to the inner sleeve using bolts or screws, to create space for the spindle when retracted. This design, however, does not possess adequate stability, thus

requiring several plates in some circumstances which must be connected to the inner tube. Consequently, manufacture is rendered more complex, while the space gained for the spindle is only minimal.

5           The goal of this invention is to create a supporting device which has greater free space for the spindle, with the foot-receiving device simultaneously exhibiting a high degree of stability. In addition, the foot-receiving device must also be appropriate for use with different supporting devices/support feet.

10           This goal is met by a supporting device whose foot receiving device comprises a component that occludes the inner sleeve and which possesses

- 15           - an opening for the spindle penetration,  
            - at least one bracing element at the top or bottom end, and  
            - two opposite bearing points for the support foot.

20           The spindle can penetrate through this opening, whose position has been adapted for the position of the spindle and which can be either centered or eccentric, and through the attachment region of the support foot when the supporting device is retracted without any hindrance. Consequently, the minimum length of the supporting device is defined only by the foot and/or by the cover that is preferably located below the opening. This allows for a compact overall height and, at the same time, a longer spindle. Spindle travel can, for example, be increased by 45 - 50 mm in this  
25           manner.

30           The pivoting bearing for the support foot, which is normally of a design using a single bolt, is replaced in accordance with this invention by two (2) bearing points located on the side of the penetration opening. Hence, the free space for the spindle is not restricted by the bearing, as these two

bearing points do not possess a common component connecting the bearing points.

The bracing element is preferably arranged inside the inner sleeve.

5

It is advantageous when the bracing element extends at least to between the bearing points in order to enhance the bending section modulus between the bearing points.

10

The component is designed as a plate, with at least one bracing element designed as a bracing rib. It has been demonstrated that the requisite flexural strength that is guaranteed by through bolts for the current state of the art can be achieved using one or more bracing ribs.

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The bracing rib(s) on the top and/or bottom of the plate, which can preferably be made in one piece to follow the contour of the plate, guarantee a high degree of stability and represent a less complex design, without requiring additional components.

20

To be most advantageous, the bracing rib is arranged in a bow-shape around the opening. To provide symmetry it is also of benefit when at least two (2) bracing ribs are provided on the top and/or bottom of the plate.

25

Preferably the plate also possesses an edge section located outside the bracing rib for attachment of the inner sleeve. This edge area can be used for example for welding the foot-receiving device onto the end of the inner sleeve. This edge section can be dimensioned such that it is flush with the inner sleeve. It is also feasible that the width of the edge section be somewhat larger, allowing inner sleeves of differing diameters to be attached

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to the section so that the foot-receiving device can be used universally.

Preferably the bearing point is arranged on the plate plane, allowing a high level of stability to be achieved, in particular when bracing ribs are located above and below the plate.

5           Based on a further design, with the component in the form of a plate, provision is made for a circumferential bracing rib arranged on the top of the plate, which engages with positive locking in the inner sleeve, and a circumferential rib on the bottom, which becomes an end part that acts as a cover. Fitting of the bracing rib in the inner sleeve results in an extended  
10 attachment area and, hence, in enhanced overall stability of the foot-receiving device. Also contributing to this enhanced stability is the circumferential bracing rib on the bottom, which also becomes a bottom part over the transition section if required.

15           The foot-receiving device preferably comprises two (2) halves, which can be laterally reversed and preferably welded together prior to installation. This two-half design offers advantages with regard to manufacturing.

20           Based on a further design, the component is in the form of a vertically arranged tube whose outside diameter in at least one upper section is less than or equal to the inside diameter of the inner sleeve. This design has the advantage that the tube wall simultaneously forms the top and bottom-bracing element. Here, the inside of the tube forms the opening for the spindle. This provides for a particularly simple foot-receiving device.

25           Preferably the tube is a rectangular tube.

30           The tube can be inserted easily into the inner sleeve when the outer diameter is equal to the inside diameter of the inner sleeve, with a larger contact area available for welding with the inner sleeve.



The bearing points are preferably attached on the outside, in particular on the outside of the tube. As loading of the supporting device is exerted at the lowest point of the supporting device, it is advantageous when the bearing points are arranged at the widest space possible.

5

The opening for the spindle can be closed off by a cover mounted at the bottom of the component in order to provide splash-proofing for the spindle. This cover may either be an integral element of the component, or can be bolted on, for example, as a separate item.

10

The foot-receiving device permits a modular supporting device design by allowing different types of support feet to be mounted, without requiring complicated refitting measures.

15

Examples of designs for this invention are elucidated in more detail using the drawings listed in the following.

Designs shown:

20

- |                  |   |
|------------------|---|
| Fig.1            | a vertical section through the foot receiving device,                       |
| Figs. 2, 3 and 4 | a top view, a section through and a side view of the foot-receiving device, |
| Figs. 5a, b      | perspective view and cross-section view of a further design                 |
| Figs. 6a, b      | cross section and top view of a further design                              |
| Fig. 6c          | the design shown in Figs. 6a, b, when installed.                            |

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A foot-receiving device 1 is shown in Fig. 1 that is arranged at the bottom of the inner sleeve 8 of a supporting device. The spindle 11 is located on the inside of the inner sleeve. The spindle is connected to gearing (not shown) arranged in the top section of the supporting device in order to

extend the inner sleeve 8. Figure 1 shows the situation with the inner sleeve 8 retracted. The corresponding outer sleeve is likewise not shown.

5 The foot-receiving device 1 possesses a plate 2 provided with an opening 3 through which the spindle 11 extends downward. On the inside of the inner sleeve 8 the plate 2 is fitted with two (2) symmetrical bracing ribs, of which only bracing rib 5a is visible, which extend around the opening 3 between the bearing points 4a, b. No further bracing ribs are provided on the bottom. A cover 12 is located at the bottom in order to close off the opening 10 3 and to protect the spindle 11 against splash water. This cover 12 may be a separate part, or may be an integral part of the plate 2.

15 Two (2) opposing bearing points 4a and 4b are arranged adjacent to the opening 3. Two (2) bolts 9a and 9b, which support the two flanges 10a and 10b for the support foot 21 (also not shown in detail), are supported in these bearing points.

Fig. 2 presents a top view of the foot-receiving device 1.

20 The opening 3 is arranged slightly eccentrically in the plate 2. The opening 3 is bordered on the sides by the two curved bracing ribs 5a and 5b, which extend into the region of the bearing points 4a and 4b. The edge section 7 of the foot-receiving device is located outside of the bracing ribs 5a and 5b. The inner sleeve is welded to the edge section 7. The dimensions 25 for the edge section 7 for the design presented here (Fig. 1) have been adapted to the dimensions for the inner sleeve 8 so that the edge section 7 is flush with the inner sleeve.

30 A longitudinal section along the line III - III in Fig. 2 through the foot-receiving device 1 is shown in Fig. 3. In addition to bracing ribs 5a and 5b,

two (2) further bracing ribs are provided at the bottom, of which bracing rib 6a is visible. Similar to the top bracing ribs 5a and 5b, bracing ribs 6a and 6b are also curved.

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Fig. 4 shows a side view, which clearly illustrates the bearing points 4a and 4b located on the plane of the plate 2.

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A further design is shown in Figs. 5a and 5b. The foot receiving device consists of two (2) laterally reversed halves 1a and 1b, with only one half 1a and 1b shown in the corresponding Figures 5a and 5b. Likewise, only half of the circumferential rib 5 on the top of plate 2 is shown. The outside diameter of this circumferential rib 5 corresponds to the inside diameter of the inner sleeve 8, such that the bracing rib 5 is in contact with the inner sleeve. This bracing rib extends downward as a shoulder 22, which lies against the end of the inner sleeve. A circumferential bracing rib 6 is also arranged below plate 2. As shown in Fig. 5, this rib extends over an arched section 14 and then forms a bottom part 13. This bottom part 13 is arranged below the opening 3 and prevents the ingress of splash water.

15

20

Bearing point 4a, with an opening for accommodating the bolt for the pivot bearing for a foot, is set in the bottom bracing rib 6.

25

A further design for the foot-receiving device 1 is shown in Figs. 6a and 6b. The component consists of a tube 15, which, as shown in Fig. 6b, is in the form of a rectangular tube. The inside of the rectangular tube 15 forms the penetration opening 3, while the tube wall simultaneously assumes the function of the top bracing rib 5 and the bottom bracing rib 6. Bearing points 4a and 4b are formed by the bearing tube sections 16 on the outside of the tube, into which two (2) further bearing tube sections 17 are fitted

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and which are held by a disk plate 18 and a bolt 19 that is screwed into the tube 15.

Fig. 6c shows the designs illustrated in Figs. 6a and 6b when they are installed. A cover plate 12 is additionally arranged at the bottom of the tube. The inner sleeve 8 is welded on to the first bearing tube section 16. A support foot 20 is shown with foot plate 21 and foot flanges 10a and 10b, with foot flanges 10a and 10b supported on the second bearing tube section 17 so as to allow them to pivot.

10

## Legend

	1	Foot-receiving device
5	1a, b	Halves
	2	Plate
	3	Opening
	4a, b	Bearing point
	5, 5a, b	Top bracing rib
10	6, 6a, b	Bottom bracing rib
	7	Edge section
	8	Inner sleeve
	9a, b	Bolt
	10a, b	Foot flange
15	11	Spindle
	12	Cover
	13	Bottom part
	14	Arched section
	15	Tube
20	16	First bearing tube section
	17	Second bearing tube section
	18	Disk plate
	19	Screw
	20	Support foot
25	21	Foot plate
	22	Shoulder

## Patent Claims

1. Supporting device for semi-trailers with an outer sleeve and a spindle for a telescopic inner sleeve at whose bottom end a foot receiving device for attaching a support foot is mounted, characterized by,

the foot-receiving device (1) comprising a component that occludes the inner sleeve (8), which possesses

an opening (3) for the spindle (11) penetration,

- at least one bracing element (5, 5a, b, 6, 6a, b) at its top or bottom end and

- two (2) opposing bearing points (4a, 4b) for accommodating the support foot.

2. A supporting device in accordance with Claim 1, characterized by the bracing element (5a, b, 6a, b) being arranged within the inner sleeve (8).

3. A supporting device in accordance with either Claim 1 or Claim 2, characterized by the bracing element (5, 5a, b, 6, 6a, b) extending at least to between the bearing points (4a, b).

4. A supporting device in accordance with one of the previous claims 1 through 3, characterized by the component being a plate (2) and the bracing element being a bracing rib (5a, b, 6a, b).

5. A supporting device in accordance with one of the previous claims 1 through 4, characterized by the bracing rib (5a, b, 6a, b) having a curved shape and being located around the opening (3).

6. A supporting device in accordance with one of the previous claims 1 through 5, characterized by the plate (2) possessing an edge section (7) located outside of the bracing rib (5a, b, 6a, b) for attachment of the inner sleeve (8).

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7. A supporting device in accordance with one of the previous claims 1 through 6, characterized by the bearing points (4a, b) being arranged on the plate (2) plane.

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8. A supporting device in accordance with one of the previous claims 1 through 7, characterized by a circumferential bracing rib (5), which engages the inner sleeve (8) in a forced fit, being arranged on the top of the plate (2) and

which forms a bottom part (13) that constitutes a cover (12) at the bottom of the circumferential rib (6).

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9. A supporting device in accordance with Claim 8, characterized by the foot receiving device (1) consisting of two (2) laterally reversed halves (1a, b).

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10. A supporting device in accordance with Claim 1, characterized by the component comprising a vertically arranged tube (15) whose outside diameter is less than or equal to the inside diameter of the inner sleeve (8) in at least one section.

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11. A supporting device in accordance with Claim 10, characterized by the tube (15) being a rectangular tube.

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12. A supporting device in accordance with Claim 10 or 11, characterized by the bearing points (4a, b) being attached to the outer surface of the tube (15).

13. A supporting device in accordance with one of the previous claims 1 through 7 or 9 through 12, characterized by the opening (3) being closed off by a cover (12).

Fig. 5b SECTION A - A



## ABSTRACT

The invention relates to a supporting device, which comprises a larger clearance for the spindle, whereby the foot receiving device should comprise a high level of stability. The foot-receiving device (1) comprises a component, which occludes the inner sleeve (8). Said component comprises an opening (3) for admitting the spindle (11), at least one bracing element (5, 5a, b, 6, 6a, b) located on the upper and/or bottom sides thereof, and two opposing bearing points (4a, 4b) for the support foot.

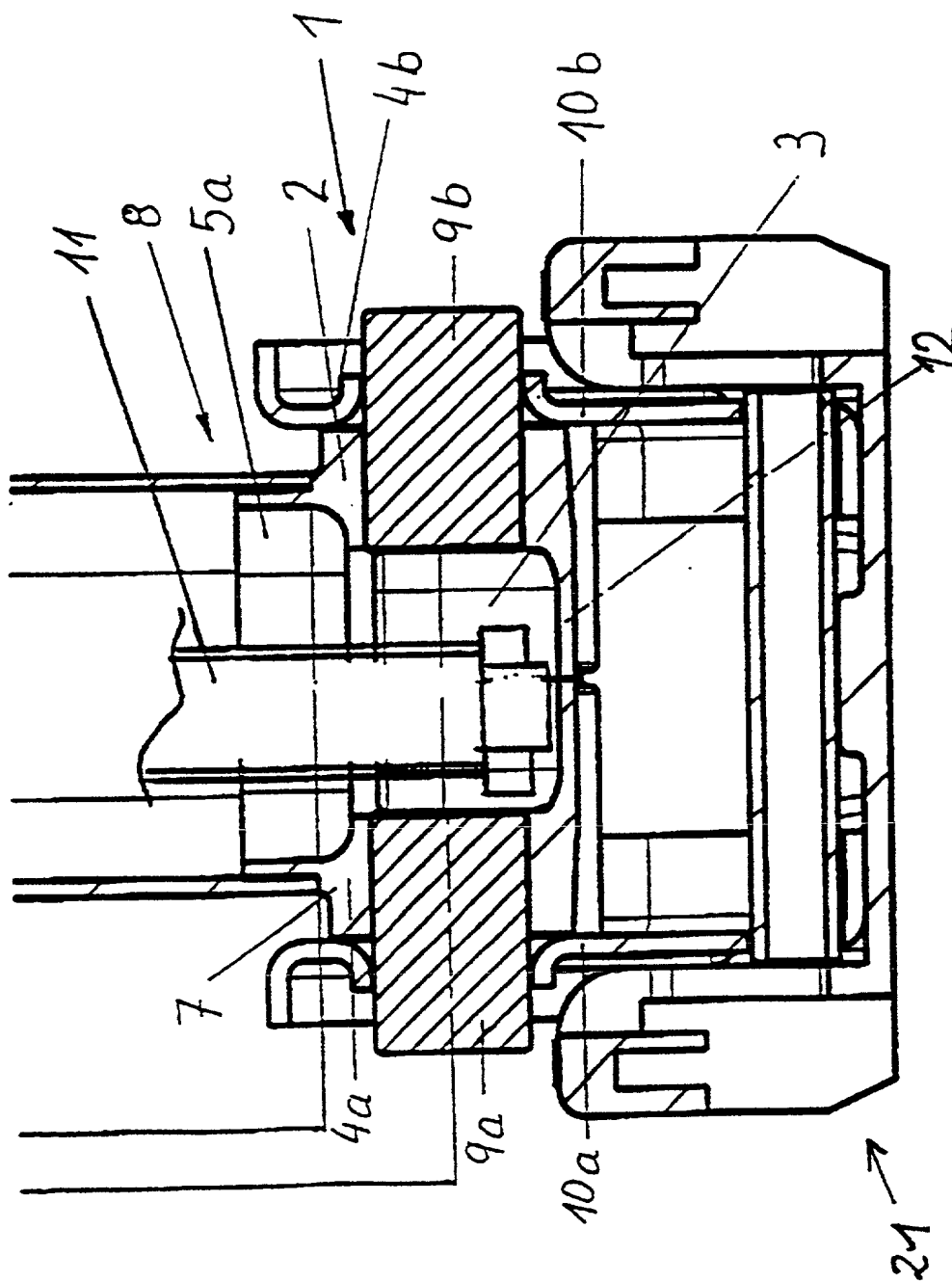
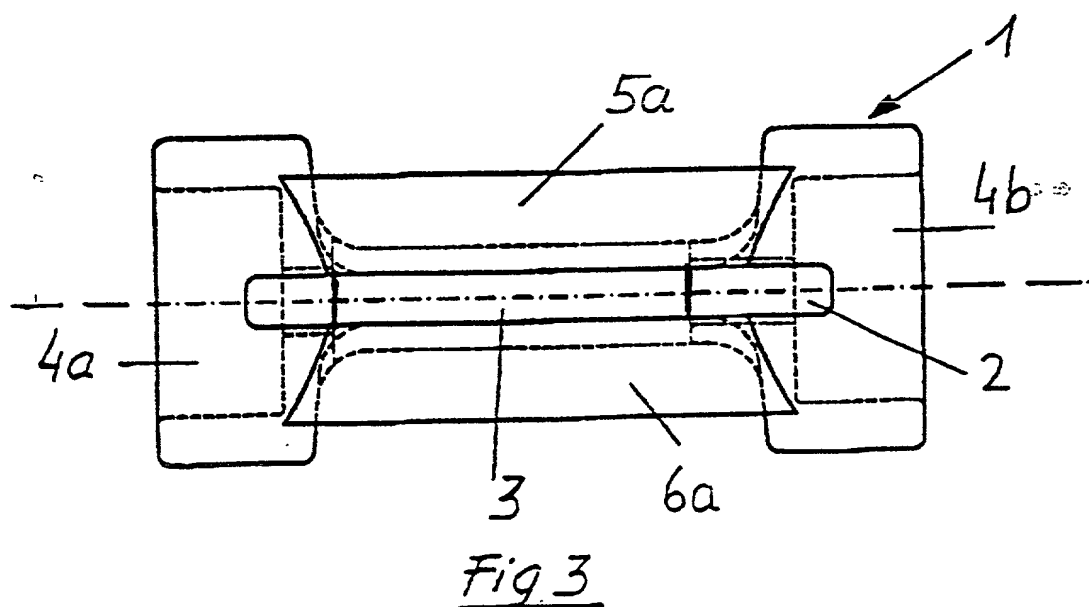
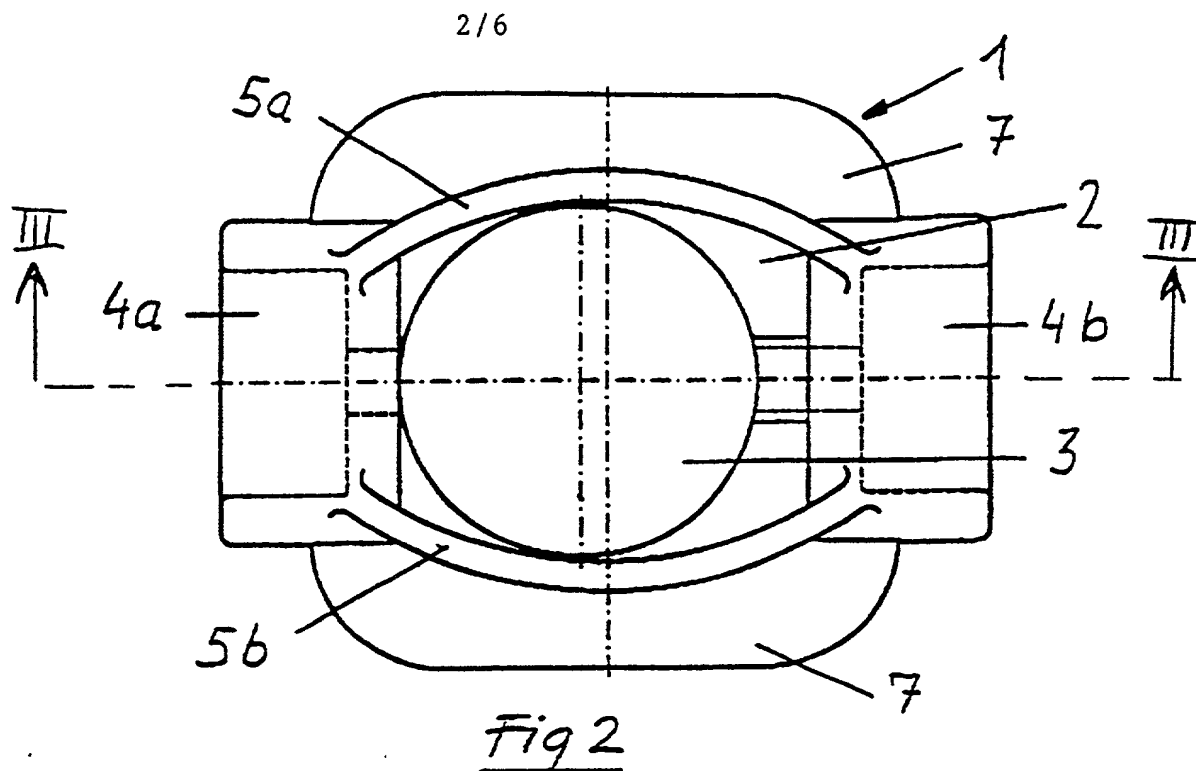
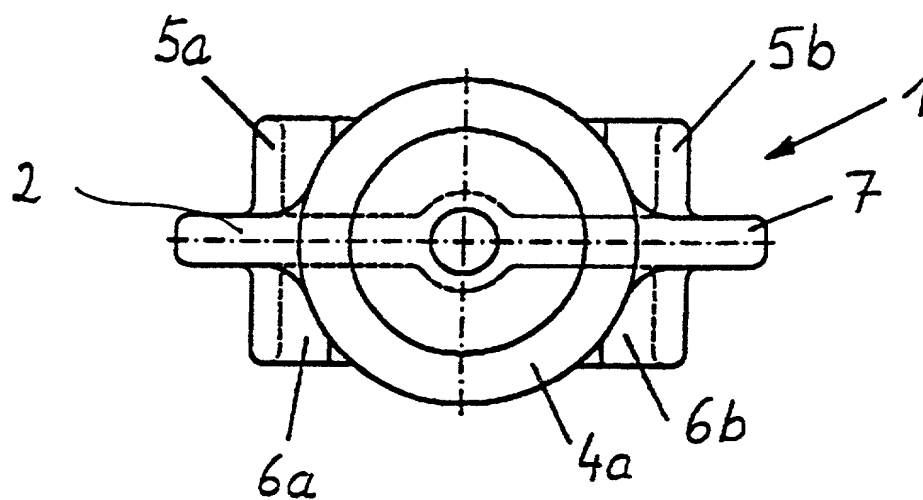


Fig 1



Fig 4

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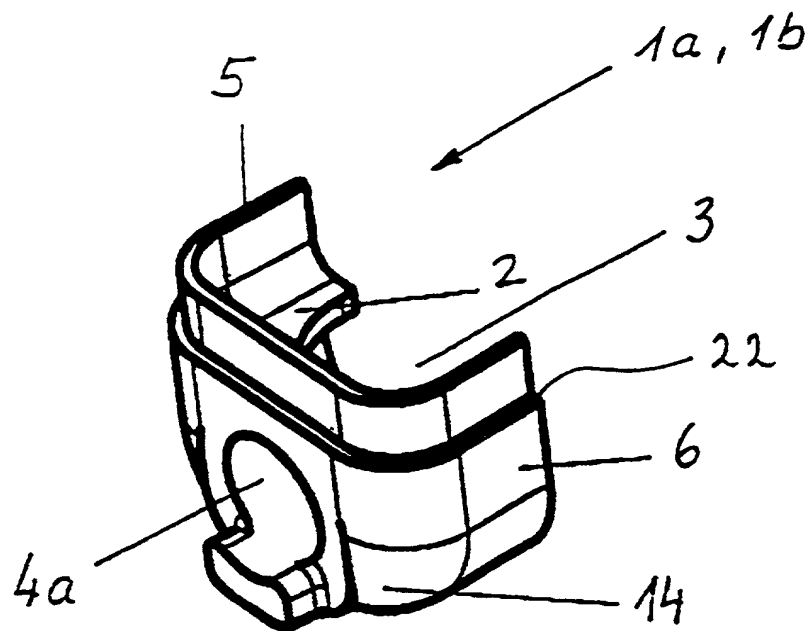


Fig 5a

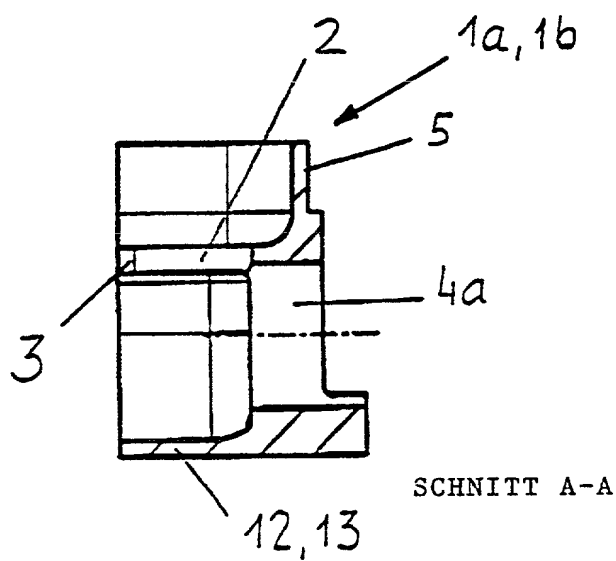
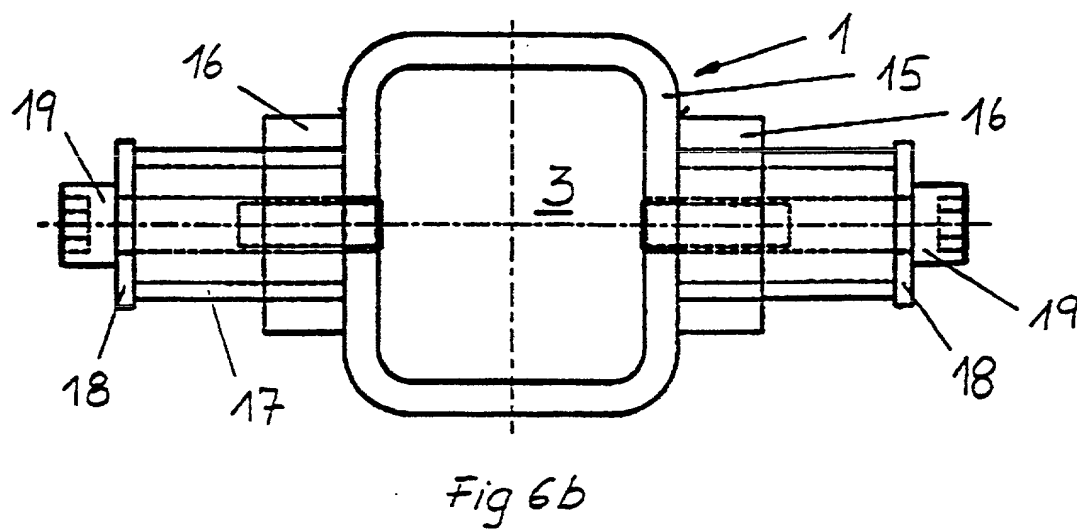
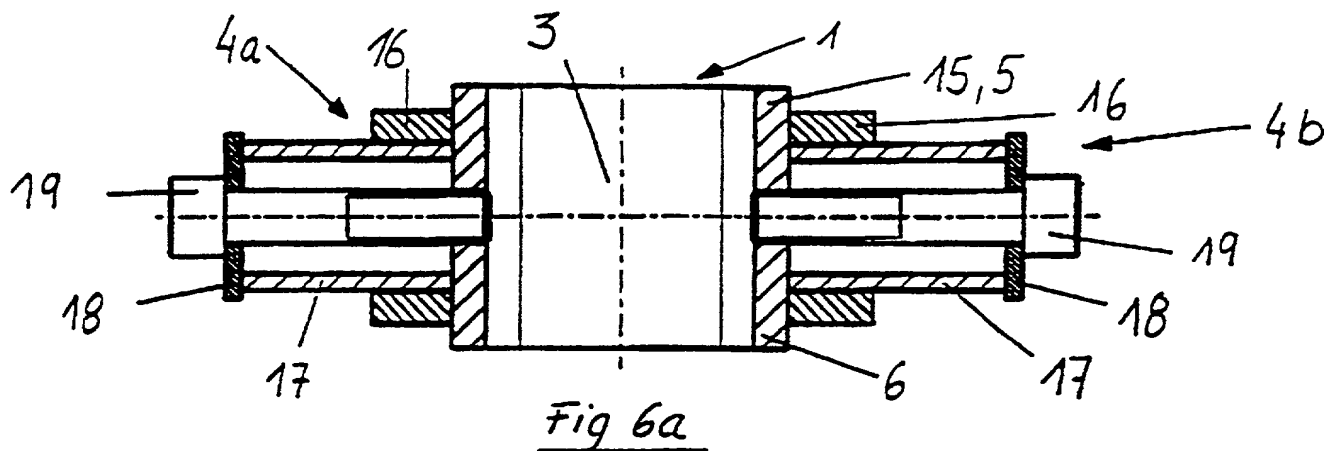


Fig 5b

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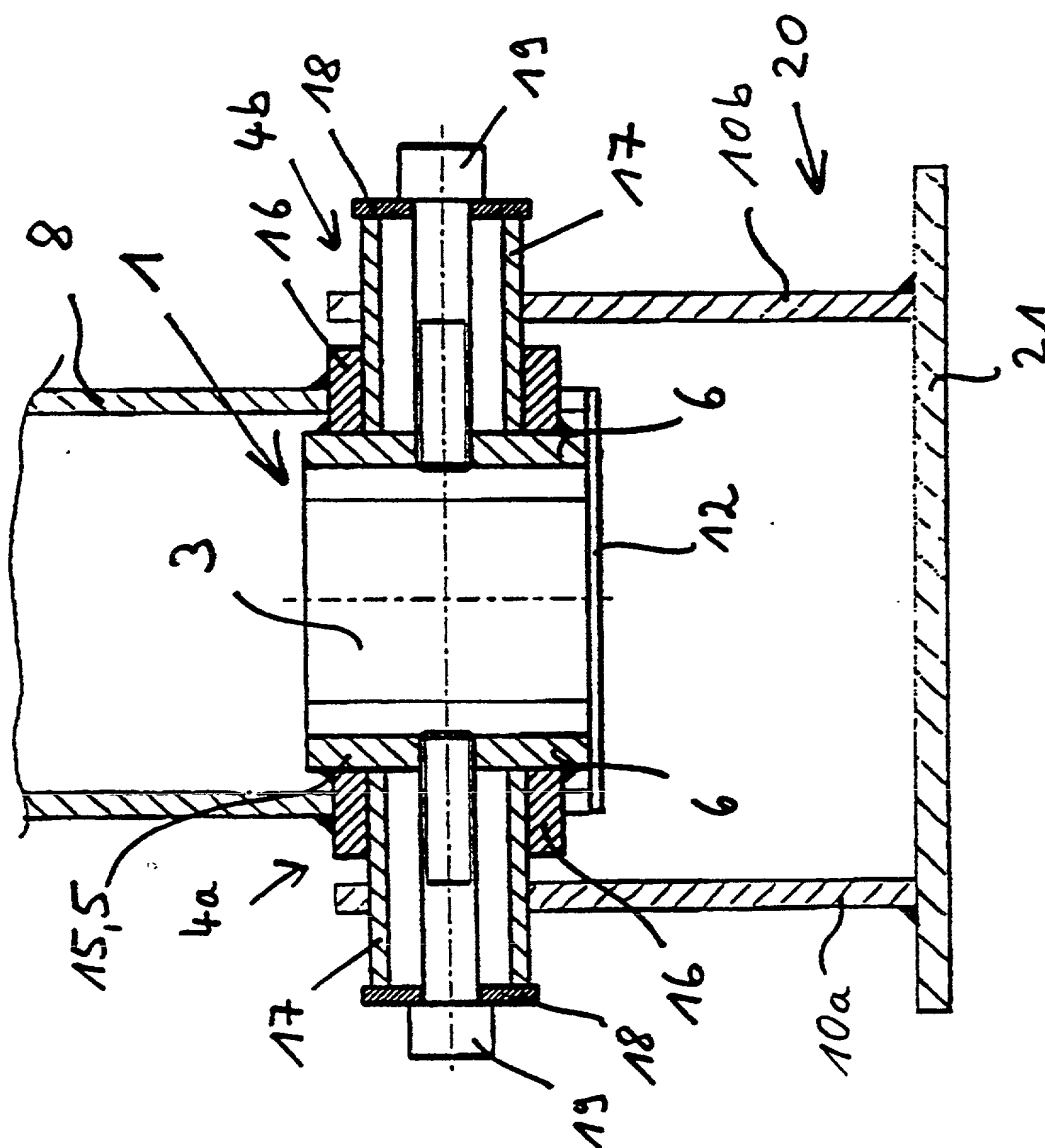


Fig. 6c

PTO/SB/01 (4-96)

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<b>DECLARATION FOR UTILITY OR DESIGN PATENT APPLICATION</b>	Attorney Docket No.	FMW-DD-PCT-US (J 161)
	First Named Inventor	ALGUERA GALLEGO, José Manuel
	<b>COMPLETE IF KNOWN</b>	
	Application Number	09/786,041
	Filing Date	
	Group Art Unit	
Declaration	OR	Declaration
<input checked="" type="checkbox"/> Submitted		<input type="checkbox"/> Submitted after
with Initial Filing		Initial Filing
Examiner Name		

As a below named inventor, I hereby declare that:

My residence, post office address, and citizenship are as stated next to my name.

I believe I am the original, first and sole inventor (if only one name is listed below) or an original, first and joint inventor (if plural names are listed below) of the subject matter which is claimed and for which a patent is sought on the invention entitled:

**"SUPPORT FOOT"**

(Title of the Invention)

the specification of which

☐ is attached hereto

OR

☒ was filed on (MM/DD/YYYY) 08/28/1999 as United States Application Number or PCT International

Application Number PCT/EP99/06337 and was amended on (MM/DD/YYYY) 08/12/2000 (if applicable).

I hereby state that I have reviewed and understand the contents of the above identified specification, including the claims, as amended by any amendment specifically referred to above.

I acknowledge the duty to disclose information which is material to patentability as defined in Title 37 Code of Federal Regulations, §1.56.

I hereby claim foreign priority benefits under Title 35, United States Code §119 (a)-(d) or §365(b) of any foreign application(s) for patent or inventor's certificate, or §365(a) of any PCT international application which designated at least one country other than the United States of America, listed below and have also identified below, by checking the box, any foreign application for patent or inventor's certificate, or of any PCT international application having a filing date before that of the application on which priority is claimed.

Prior Foreign Application Number(s)	Country	Foreign Filing Date (MM/DD/YYYY)	Priority Not Claimed	Certified Copy Attached?	
				Yes	No
198 39 360.1	DE	08/28/1998		<input type="checkbox"/>	<input checked="" type="checkbox"/>
				<input type="checkbox"/>	<input type="checkbox"/>
				<input type="checkbox"/>	<input type="checkbox"/>
				<input type="checkbox"/>	<input type="checkbox"/>
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☐ Additional foreign application numbers are listed on a supplemental priority sheet attached hereto:

I hereby claim the benefit under Title 35, United States Code §119(e) of any United States provisional application(s) listed below.

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<b>DECLARATION</b>	Page 2
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I hereby claim the benefit under Title 35, United States Code §120 of any United States application(s), or §365(c) of any PCT international application designating the United States of America, listed below and, insofar as the subject matter of each of the claims of this application is not disclosed in the prior United States or PCT International application in the manner provided by the first paragraph of Title 35, United States Code §112, I acknowledge the duty to disclose information which is material to patentability as defined in Title 37, Code of Federal Regulations §1.56 which became available between the filing date of the prior application and the national or PCT international filing date of this application.

U.S. Parent Application Number	PCT Parent Number	Parent Filing Date (MM/DD/YYYY)	Parent Patent Number (if applicable)
	PCT/EP99/06337	08/28/1999	

☐ Additional U.S. or PCT international application numbers are listed on a supplemental priority sheet attached hereto.

As a named inventor, I hereby appoint the following registered practitioner(s) to prosecute this application and to transact all business in the Patent and Trademark Office connected therewith:

Name	Registration Number	Name	Registration Number
HUDAK, Daniel J.	25,879	TYRPAK, Michele M.	42,192
SHUNK, Laura F.	31,423	HUDAK, Daniel J. Jr.	P-47,669
ROTE, Frank C. Jr.	20,395		
SHUST, Nestor, W.	23,034		

☐ Additional registered practitioner(s) named on a supplemental sheet attached hereto.

Direct all correspondence to:

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Address	7 West Bowery Street, Suite 808		
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		Fax	330-535-1435

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

Name of Sole or First Inventor:		<input type="checkbox"/> A petition has been filed for this unsigned inventor	
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Family Name	ALGUERA GALLEG0	Suffix e.g. Jr.	
Inventor's Signature	[Signature]		Date 22.2.01
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City	Aschaffenburg	State	Germany
		ZIP	D-63739
		Country	Germany

☒ Additional inventors are being named on supplemental sheet(s) attached hereto.

Type a plus sign (+) inside this box → ☐

## DECLARATION

ADDITIONAL INVENTOR(S)  
Supplemental Sheet

Name of Additional Joint Inventor, if any:										<input type="checkbox"/> A petition has been filed for this unsigned inventor	
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Inventor's Signature	<i>S. Müller</i>						Date	23.02.01			
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Name of Additional Joint Inventor, if any:											
Given Name										<input type="checkbox"/> A petition has been filed for this unsigned inventor	
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Inventor's Signature	<i>Steffen Pfister</i>						Date	28.2.01			
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Post Office Address											
City	Langen				State		ZIP	D-63225		Country	Germany
Name of Additional Joint Inventor, if any:											
Given Name										<input type="checkbox"/> A petition has been filed for this unsigned inventor	
Given Name					Middle Initial		Family Name			Suffix e.g. Jr.	
Inventor's Signature							Date				
Residence: City					State		Country			Citizenship	
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Name of Additional Joint Inventor, if any:											
Given Name										<input type="checkbox"/> A petition has been filed for this unsigned inventor	
Given Name					Middle Initial		Family Name			Suffix e.g. Jr.	
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TOTAL P. 07